

A SELF-DETERMINATION THEORY PERSPECTIVE ON ADJUSTMENT TO  
COLLEGE

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A Dissertation

Presented to

The Faculty of the Department

of Psychology

University of Houston

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In Partial Fulfillment

of the Requirements of the Degree of

Doctor of Philosophy

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By

Jennifer Bryan

August, 2014

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**ABSTRACT**

Emerging adulthood, ages 18-25, is filled with transition and has been described as the most changing times of one's life. This is also when two-thirds of the American population enters college, however, many dropout before completion of their desired degree. There is little evidence as to the existence of possible differences in adjustment trajectories or determinants of and influences on such trajectories. Thus, there is a gap in our theoretical understanding of the adjustment to college process. This study applied self-determination theory to provide theoretical insight to the adjustment to college process specifically paying attention to how and why maladjustment may occur. It was hypothesized that intrinsically motivated, authentic students and those with high basic need satisfaction at baseline would have better adjustment to college and less alcohol related problems at the one month follow-up. Further, those who are more likely to suppress their emotions and self-conceal would have worse adjustment to college and more alcohol related problems at the one month follow-up. Participants were recruited in diverse departments at the University of Houston. Three-hundred and fifty eight (Mean age = 21.82, SD = 5.520, 72.3% female). Participants completed the baseline questionnaire and the follow-up one month later. All hypotheses were analyzed using multiple regression with the baseline SDT, concealment/suppression and baseline outcome variables entered as predictors of the time two outcome variables. Results revealed that baseline motivation and general needs satisfaction were positively associated with adjustment to college, while self-concealment was negatively associated with adjustment to college at time 2. However, only self-concealment remains a significant predictor when controlling for baseline adjustment to college. Alcohol related problems at time 2 were negatively associated with baseline motivation, authenticity, as well as positively associated with self-concealment. When controlling for baseline alcohol related

problems results remained, however, self-concealment was no longer a significant predictor. The proposed research sheds light on our theoretical understanding of the adjustment to college process. These findings have practical utility and may inform development and implementation of interventions and programs targeting adjustment to college and alcohol related problems among college students.

*Keywords:* Self-determination theory, authenticity, emerging adulthood, adjustment to college, emotion suppression, self-concealment

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## **A Self-Determination Theory Perspective on Adjustment to College**

*“I wish I had known that everything would be OK because there are literally thousands of students just like you; everyone lost in the beginning but everyone finding their way in the end.....don't feel like you HAVE to do anything. Peer pressure is still uncool, even in college.”*

### **Emerging adulthood and a plethora of change**

Emerging adulthood occurs between the ages of 18-25. This time in one's life is filled with transition and has been described as the most changing times of one's life (Arnett, 2000). When this life stage is entered, everything that was once stable begins to change and the emerging adult is faced with a cornucopia of decisions. Until the age of 18, it is the United States federal law that the student must attend high school unless the parent or guardian allows the student to withdraw. In 2009, 95% of the American population between the ages of 16-17 was enrolled in high school (Institute of Education Sciences, 2011). While in high school many students do not have the choice of which school they attend or the classes in which they enroll. This is because many of the requirements and school districting are typically state and district mandated. As high school graduation nears, they are faced with the first major choice of the transition into adulthood. Upon graduation some students may choose to enter the work force directly, or enlist in the military, however, the majority of high school seniors choose to further their education. If the graduating senior chooses additional education, he or she is met with an overwhelming amount of choices of where to obtain this education and what to study. Educational dilemmas are not the only transitions that emerging adults are faced with. Emerging adulthood is the only period of life in which nothing is normative demographically (e.g., where they are living or with whom they are living) (Rindfuss, 1991). Before this stage in life, most adolescents lived at home with at least one parent, attended high school, and did not have a child (U.S. Department of Education, 2012). Post high school graduation, the emerging adult faces the



choice of where to live. Some possible choices in living arrangements are they could stay at their parents' house, live in a dorm, with roommates, or by themselves. They also have the choice of staying in their hometown, moving to a nearby city, across the country, or even internationally. As emerging adults embark on their life journey the motivation behind their decisions will have a substantial effect on their well-being. The review to follow will focus on those emerging adults who choose to further their education by enrolling in college.

Higher education is related to obtaining a better job, increased personal and professional mobility, as well as higher salaries. Beyond the monetary gain, higher education is also related to better general health, longer life expectancy, improved personal status, improved quality of life for graduates' offspring, and increased recreational time and leisure activities (Institute for Higher Education, 1998). With all the benefits related to higher education it is no wonder that in the United States, as of 1998, approximately two-thirds of young adults attend either a two- or four-year college in hopes of obtaining higher education (Commission, 1998). Despite the majority of the population entering college, a large percentage drops out before graduation - many during their first year (Hamilton & Hamilton, 2006). One possible reason for the high dropout rates is maladjustment to college. A recent study revealed that 15.6% of undergraduates screened were diagnosed with either depressive symptoms or an anxiety disorder (Eisenberg, Gollust, Golberstein, & Hefner, 2007). In a recent study of the American Freshman, over 200,000 freshmen at 279 universities across the nation participated in a study looking at how students were adjusting to college. This yearly survey started in 1985 and revealed the all-time low mental health ratings for students in 2010 (Sieben, 2011). As compared to their peers, 51.9% of freshman said that they had above average mental health and 29.1% said that they felt frequently overwhelmed.

Many overwhelmed students may turn to alcohol to cope. Although most U.S. college students are under the legal drinking age of 21, most drinkers report their heaviest drinking habits to be between the ages of 18-21 (Chen & Kandel, 1995). College students are more likely to drink heavily than their non-college peers (Johnston, O'Malley Bachman, & Schulenberg, 2012), and in fact, 20% of undergraduates meet DSM-IV criteria for alcohol dependence or abuse (NIAAA, 2007). Heavy drinkers are more likely to experience a cornucopia of consequences such as academic difficulties, trouble with authorities, hangovers, injuries (Hingson, Heeren, Winter, & Wechsler, 2005; Hingson, 2010; Wechsler, Kuo, Lee, & Dowdall, 2000; Wechsler, Davenport, Dowdall, & Moeykens, 1994), health and psychosocial problems (Wechsler et al., 2000), depression (Geisner, Larimer, & Neighbors, 2004), risky sexual behavior, and sexual assault (Abbey, Buck, Zawacki, & Saenz, 2003; Kaysen, Neighbors, Martell, Fossos, & Larimer, 2006; Koss & Gaines, 1993; Larimer, Lydum, Anderson, & Turner, 1999). In 2009, the U.S. Surgeon General declared reducing heavy drinking among college students a major health goal for the country (U.S. Department of Health and Human Services, 2009). Thus heavy drinking and alcohol related problems are vital to assess with adjustment to college.

As students embark on the novel journey of transitioning to college they are met with many new situations and presented with challenges that they have not faced before. The challenges that students face are diverse, novel, and are most likely experienced at a distance from their established social support system as over 60% of college freshman attend a school that is more than 50 miles from their home (Pryor et al., 2012). For the first time, what classes the student takes is dependent on the student. Students are also solely responsible for themselves and the financial aid department and professors are not allowed to discuss the student with their

parents. There is a greater independency in how their time is spent with no enforcement of time management (e. g., detentions for being late to class). Students are also faced with greater financial responsibility as they need to determine how to pay for college tuition and other expenses. This may be a stressful topic for many students as only 32.1% of incoming freshman are confident that they will have sufficient funds for their education (Pryor et al., 2012). Thus, it is the students' responsibility to learn the process of applying for financial aid and taking out student loans. Other novelties in college life are making new friends as many students in high school have known their peers for the majority of their lives thus far. This could be the first time since kindergarten that they walked into a classroom not knowing anyone. Also, if the student chooses to not live at home, he or she is met with either having to prepare their meals or navigate a dining hall. Not to mention it may be the first time the student has the need to self-regulate several tasks such as doing laundry or waking oneself up for class.

This new environment, filled with copious decision opportunities, can be a breeding ground for stress if the student is maladjusted. According to Credé and Niehorster (2012) most, if not all, students are likely to experience adjustment difficulties in the first few days to weeks of college. However, there is little evidence on possible differences in adjustment trajectories or determinants of influences on such trajectories. This lack of evidence regarding adjustment represents a gap in our theoretical understanding of the adjustment to college process. Reason (2009) also emphasized the need to illuminate the relationships between student motivation and academic outcomes. This study aims to bridge this gap by application of the self-determination theory (SDT). The goal of the present study is to understand the process of adjustment to college through a SDT approach. More specifically, the roles that motivation and basic need fulfillment

play in the (mal) adjustment to college process, especially in the realm of risky behavior will be explored.

### **Self-determination Theory**

Self-determination theory (SDT; Deci & Ryan, 1985, 2000) is an extensive motivational theory which developed over decades of empirical research. Fundamentally, SDT states that development and psychological growth is natural to the human experience. Essentially, people instinctively experience a drive to master challenges and form a cohesive sense of self by the integration of his or her experiences. SDT consists of 4 micro theories; cognitive evaluation, organismic integration, causality orientations, and basic needs. Cognitive evaluation theory explains the effects of the environment and social context on facilitating or undermining of intrinsic motivation. Organismic integration theory focuses on the internalization process of completing a behavior, in other words, how people can move along the motivation spectrum becoming more self-determined in engaging in behavior as they start to internalize ownership of the activity. Causality orientations theory addresses individual differences in the predisposition toward a more self-determined behavior. Finally, basic needs theory describes basic psychological needs that are universal human and vital for well-being. These needs are autonomy, relatedness, and competence.

SDT has been shown to be related to psychological and physical health in many domains. In a longitudinal study of high school students, time 1 autonomous goal regulation predicted life satisfaction, positive affect, and self-esteem positively, and negative affect negatively at the two year follow-up (Litalien, Lüdtke, Parker, & Trautwein, 2013). With regard to health behaviors, patients' need satisfaction was positively related to perceived dental competence as well as self-determined motivation for dental hygiene (Halvari, Halvari, Bjørnebekk, & Deci, 2013). SDT

has also been shown to be related to adjustment in many domains. A review looking at children's adjustment to parental divorce revealed that children were better adjusted if parents were autonomy supportive and, despite divorce's potential threat to GNS, that if the basic psychological needs were still met children could thrive (Friendly & Grolnick, 2009). Within a population of HIV positive and AIDS participants, intrinsic motivation behind personal strivings was related positively to well-being and autonomy was related to adjustment to their life threatening disease (Igreja et al., 2009).

### **General Needs Satisfaction**

According to Deci and Ryan (1991), needs are defined as nutrients essential to a living individual's psychological growth, integrity, and health. They are said to be as vital to optimal development as light, water, minerals, and proper temperatures are to plants. Humans require these physical needs as well as three fundamental psychological needs: autonomy, competence, and relatedness to thrive (Deci & Ryan, 2000).

The need for autonomy involves ownership and authenticity of one's activities – and refers to the need to feel that one's behaviors reflect one's true interests rather than pressures from others or oneself. A student may feel autonomous when he or she volunteers at the local community center teaching children the basics of gardening. The ideal that natural food should be available for all may be a part of the students' core beliefs and they also love gardening and communicating information about their passion, and this reflects a personally-endorsed interest and behavior.

The need for competence is fulfilled by the experience that one can achieve, creating desired outcomes while feeling optimally challenged by the activity (i.e., being good at something). With regard to college, this may involve enrolling in a creative writing class,

learning new writing techniques, and noticing improvement in one's writing. Self-determination theory postulates that perceived competence will not lead to greater well-being unless the behavior performed is autonomous (Ryan, Mims, & Koestner, 1983). For example, imagine that Bob is an excellent tuba player and has been in his high school marching band for 4 years. However, he no longer derives pleasure from playing his Tuba. Bob's parents force him into playing for his college's marching band because he is wonderful at playing the tuba and they enjoy watching him perform at the football games. Bob agrees to play tuba to make his parents happy, although his tuba playing competence would not increase his well-being because Bob's behavior is not self-determined.

The need for relatedness is satisfied by feeling that one is close and connected to significant others. This could be met by having a passionate discussion about ways the university can become more environmentally friendly with an environmental studies major thus fostering feeling of belongingness and attachment with one's peers. Perceived need satisfaction is enhanced by social and environmental factors that facilitate the expression of and satisfaction of those needs for autonomy, competence, and relatedness.

When any of these needs are neglected or unable to be met, suboptimal psychological outcomes are likely to follow (Deci & Ryan, 2000). In a 14-day diary study, fluctuations in daily well-being were related to psychological basic needs (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). It was found that trait self-determination was correlated with positive mood and vitality, trait competence was negatively correlated with negative mood and physical illness symptoms, and trait relatedness was correlated with positive mood. Similar findings were found in daily assessments of need satisfaction over time. Autonomy was correlated with positive mood and vitality. Relatedness correlated significantly with positive mood and vitality. Competence was

positively correlated with positive mood and vitality while negatively correlated with illness symptoms and negative mood. Within a college student sample, daily fluctuations in well-being were predicted by the satisfaction of needs for autonomy and competence (Sheldon, Ryan, & Reis, 1996). In a study with incoming college students in the beginning of the academic year, autonomy predicted emotional and social adjustment in November as well as predicted GPA, in that those who were more autonomous had a higher GPA. Autonomy accounted for as much variance in GPA as did high school GPA and SAT scores. Those students who reported feeling more autonomous were also more intrinsically motivated and less extrinsically motivated in their college endeavors (Conti, 2000). A study investigating online learning found that those who had higher need satisfaction spent more hours per week studying, logged into the course more, had a higher expected grade, and increased perceived learning (Chen & Jang, 2010).

Psychological vitality and positive mood were positively correlated with autonomy, competence, and relatedness needs as competence was negatively correlated with negative mood (Reis et al., 2000). Furthermore, Deci et al. (2001) revealed that overall basic psychological need satisfaction was positively associated with a greater level of self-esteem and negatively associated with anxiety symptoms within a cross-cultural sample. Also, a correlation between these needs and the negative emotions of depression, shame, and loneliness were found in a university student population (Wei, Shaffer, Young, & Zakalik 2005). Furthermore, autonomy, competence, and relatedness were each found to be positively related to life satisfaction, happiness, satisfaction with the day, positive affect, and negatively associated with negative affect. An important aspect of the everyday life of most college students involves attending classes, completing coursework, being successful in their studies, working toward a degree; having social interactions with peers and faculty as well as gaining experience for their future

career. Subsequently, feelings of autonomy, competence, and relatedness toward school would seem indispensable for college students' growth subjective well-being, and vitality. Thus, it is hypothesized that higher baseline general needs satisfaction would better predict college adjustment and more alcohol related problems at time two, while controlling for baseline college adjustment and alcohol related problems.

### **The motivation continuum**

According to SDT, motivation for doing a task lies along a continuum ranging from intrinsic motivation, in which a person does something for the pure pleasure of doing so, to amotivation, which is when a does not know why he or she is doing a particular behavior. The closer a behavior is on the continuum to intrinsic motivation, the more the behavior is self-determined. The farthest anchor from intrinsic motivation on the continuum is amotivation. For example, imagine that a student is an accounting major because his mom is an accountant and applied to college for him. When the letter of acceptance arrived she chose that he would be an accounting major. Imagine that this student barely attends classes and does not know why he bothers even going to college (Deci & Ryan, 2000; Ryan & Deci, 2000). Extrinsic motivation (which encompasses the center of the continuum) entails a person performing a behavior for reasons other than enjoyment. Along the continuum there are four types of extrinsic motivation. The first subset of extrinsic motivation is external regulation. External regulated behavior is motivated by external contingencies involving threats or punishments, or material and social rewards. For instance, an extrinsically motivated biology student may fear that his or her parents will no longer provide for her monetarily if she switches her major to her true passion, which is English. The next least self-determined motivation is introjected regulation, which occurs when a person rigidly adopts an external standard of self-worth and social approval without fully



identifying with it (Deci & Ryan, 2000; Ryan & Deci, 2000). Feelings of self-esteem and self-worth are produced if these standards can be met; although self-criticism and negative affect are produced if the rigid standards cannot be met. An example of this would be a pre-med major who chose his major because he believes society will value him if he becomes a medical doctor. Internal conflict may arise in behaving in accord with the adopted external standards and what the person finds important and wants (Koestner & Losier, 2002; Ryan & Deci, 2002).

Identified regulation is the next more self-determined motivation, followed by integrated regulation. These two forms of motivation incorporate an integration process of external standards merging with one's identity. Identified regulation occurs when one identifies with the importance of a behavior. Integrated motivation occurs when the reason for one's behavior is consistent with his or her other values and needs and constitutes an integral part of the self, in a more hierarchical manner (Deci & Ryan, 2000; Ryan & Deci, 2000). An example of identified motivation would be a student choosing nursing as his major because he is motivated by the importance of that career path. The student is aware of the nursing shortage and believes that he will have job security after graduation. Since the student identified with the rationale for choosing nursing as his major, he will experience some ownership of this behavior, and it is somewhat self-determined. This example of the nursing student would reflect integrated motivation if it were consistent with the student's higher order goals and with other identities such as wanting to take care of others more generally, being civic minded, and providing a meaningful service for others in the community. This is a self-determined choice, although it is still classified as extrinsic motivation because the activity was performed for its instrumental value. Intrinsic motivation entails a person doing a behavior because he or she wants to; the person finds it enjoyable and satisfying. In the realm of college, this could be a student majoring

in health psychology because he or she is fascinated by how the mind and body are interrelated, or microbiology because his or her heart skips a beat at the mere thought of looking at algae under a microscope.

Students who are more intrinsically motivated are interested in the value and challenge of new material and are more likely to gain long-term comprehension of course material (Conti, Amabile, & Pollak, 1995), and be able to fully digest concepts (Grolnick & Ryan, 1987). These more intrinsically motivated students are also more curious, creative, persistent, and enjoy more novel and higher difficulty than those students who are extrinsically motivated (Amabile, 1983; Deci & Ryan, 1985; Deci & Ryan, 1987). While students who are more extrinsically motivated may be working to satisfy parental expectations or to obtain a high GPA, this may produce effort at exam time to memorize and regurgitate information, but will yield less absorption of the knowledge (Gottfried, 1985, 1990). In a survey study, students who were intrinsically motivated had a higher GPA and exerted more effort in comprehending the information than those who were extrinsically motivated (Goodman et al., 2011). This is also reflected cross-culturally. In a study of German and US college students, the importance of intrinsic goals was positively linked with total well-being, self-actualization, and negatively correlated with anxiety and physical symptoms (Schmuck, Kasser, & Ryan, 2000). Another benefit of intrinsic motivation is that it is correlated with lower levels of stress in the adjustment process (Baker, 2004). However, a meta-analysis of the effects of extrinsic rewards on intrinsic motivation revealed that not all extrinsic motivations are detrimental. It was found that verbal rewards were particularly enhancing for college students intrinsic motivation (Deci, Koestner, & Ryan, 1999). The aforementioned outcomes of intrinsic motivation give evidence for why the motivation behind an action is vital to explore. Thus, it is hypothesized that baseline extrinsic motivation will predict worse

adjustment to college and more alcohol related problems at time 2, controlling for adjustment and alcohol related problems at baseline.

### **Authenticity**

If students are engaging in extrinsically motivated behaviors, they are not behaving authentically. Authenticity is defined as “the unimpeded operation of one’s core or true self in one’s daily enterprise” (Goldman & Kernis, 2002). Authentic behavior is acting in harmony with values, preferences, and needs rather than engaging in “false” behaviors to gain approval from others. Optimal self-esteem tends to be non-contingent (Kernis, 2003), meaning that self-esteem is not to be based on meeting standards or attaining certain outcomes such as successful performance, approval from parents, or approval from significant others (Crocker & Wolfe, 2001). Contingent self-esteem is delicate and requires continual validation. Goldman (2004) found that contingent self-esteem was negatively related to authenticity. Those who have contingent self-esteem were also found to be more likely to engage in health risk behaviors such as binge drinking (Neighbors, Larimer, Geisner, & Knee, 2004). True self-esteem arises when an individual’s behavior satisfies one’s basic psychological needs, which then leads to more self-determined and authentic behavior (Deci & Ryan, 1995). Authenticity is linked to higher global self-esteem and life satisfaction as well as lower contingent self-esteem and negative affect (Tolman, Impett, Tracy, & Michael, 2006). Engaging in more authentic behavior is also related to fewer depressive symptoms and greater self-esteem for both genders (Weinberg, 1996). Furthermore, Kernis and Goldman (2006) found that authenticity is positively related to vitality, and negatively to psychological stress. Authenticity was also related to active coping and planning while negatively related to denial and substance use.

Ryan, LaGuardia, and Rawsthorne (2005) revealed in a cross-sectional study (study 1) of college students that authenticity was related positively to vitality and negatively to depressive symptoms, anxiety, perceived stress, as well as physical symptoms. A longitudinal study (study 2) provided insight to the lasting effects of authentic behavior. Baseline measures of authenticity, negative stressful life events, physical symptoms, depression, and perceived stress were taken. At the two-week follow-up, baseline authenticity was related to time 2 negative life events, depression and perceived stress (Ryan, LaGuardia, & Rawsthorne, 2005). Authenticity with regard to couples in romantic relationships was linked to higher relationship accommodation, self-disclosure, trust, relationship satisfaction, and over-all well-being (Brunell et al., 2010). It seems likely that a similar association would be seen in other relationships. Affect has also been shown to be predicted by authenticity such that higher authenticity is related to positive affect whereas lower authenticity is related to increased negative affect (Ito & Kodama, 2007). If students are stressed during their adjustment to college, this can also be detrimental to their feeling authentic (Kiecolt, 1994). Thus, it is hypothesized that baseline authenticity would predict better adjustment to college and less alcohol related problems at time 2, controlling for those outcomes at baseline.

### **Adjustment to College Domains and Motivation**

#### *Academic adjustment*

Adjustment to college occurs in four specific domains; academic adjustment, personal – emotional adjustment, social adjustment, and institutional attachment (Baker & Siryk, 1984). Academic adjustment reflects the degree to which students have adjusted to meeting academic demands accounting for their attitudes toward their course of study, along with engagement with material, adequacy of studying, and academic efforts. More intrinsically motivated students, who

tend to learn material for the sake of learning, also better retain knowledge post examination whereas extrinsically motivated students study for the exam in order to achieve a high exam grade, leading to a lack of long-term retention. One study that investigated anti-intellectualism (a preference for recipe knowledge, learning that is fact-oriented, memorized, plainly pragmatic, and routine) as a predictor of adjustment to college revealed a negative relationship between anti-intellectualism and academic adjustment (Hook, 2004). In other words, students who wanted to learn material for the sake of repeating it on the exam had lower academic adjustment than those who wanted to learn for understanding of the underlying principles and the joy of applying them toward hypothetical inquiry.

#### *Personal - emotional adjustment*

The next realm of adjustment is personal – emotional adjustment which refers to the effects of the demands of the college environment on stress, anxiety, and/or physical reactions (e.g., sleeplessness). Emotional adjustment may be hindered by parents, as it was reported that college students rate parental expectations and conflicts as their second most stress-producing event (Archer & Lamnin, 1985). In a study that asked parents and students to rank goals for the student, it was found that when students and parents highly agreed on goals, the parent- student dyad experienced less conflict whereas, if there was a high discrepancy in goals higher conflict was experienced (Morton & Markey, 2009). Furthermore, in a study that examined both parents' and students' expectations, students reported lower levels of self-worth and college adjustment as discrepancies increased (Agliata & Renk, 2008). This conflict and maladjustment may be experienced because the students' parents are undermining what the student is more intrinsically motivated to achieve.

*Social Adjustment*

Social adjustment is how well students have integrated themselves into the social arena of the university including dorm life, new friendships, and other activities the college has to offer. In a study investigating social goals when students arrived at college, if the student's goals were social development (more intrinsically motivated) college adjustment and social competence were higher. If their goal was to avoid negative judgment (more extrinsically motivated), this was negatively associated with adjustment, social competence, and pro-social behavior, and positively associated with anxiety. A goal of gaining positive judgments led to an increase in social competence and popularity, but was negatively associated with adjustment (Shim & Ryan, 2012). Another study looked at social adjustment and Facebook use. If students used Facebook to pursue new relationships (e.g., have a higher friend count, or post to others walls to make it appear as if they have more friends) they had lower social adjustment to college and experienced more loneliness, whereas students who used Facebook as an avenue to maintain previously established relationships reported higher social adjustment to college and less loneliness (Yang & Brown, 2013). This study also found that frequent status updating was related to poor social adjustment and higher levels of loneliness only if the students were not motivated to use Facebook for relationship maintenance, but rather to gain more friends and appear more popular (i.e. extrinsically motivated).

Another study revealed the importance of having a best friend in college. This person is someone who shares common interests, who the student is intrinsically motivated to spend time with and share desired activities. He or she is available when needed to provide support when desired in the process of adjusting to college. Relationship quality is positively related to all aspects of adjustment to college (Swenson, Nordstrom, & Hiester, 2008). A best friend or close

group of friends provides a context which the student can truly be him or herself and have positive experiences. This buffers against loneliness and the absence of positive experiences (Beyers & Goossens, 2002).

### *Institutional attachment*

Institutional attachment is defined as how emotionally attached and personally identified a student is with the university. Students who were higher on anti-intellectualism also reported lower Institutional attachment (Hook, 2004). It was also found that students who are high in socially oriented perfectionism reported lowered institutional attachment (Mann, 2004). This may be due to the student needing others' approval, and feeling that they could not live up to the expectations of the university.

### **Risk behaviors**

In addition to adjustment, risk behavior is also important to consider. When students enter college they may have preconceived notions about how a college student should act and feel pressure to act in accordance with media portrayal of college (e.g., casual sexual encounters or binge drinking,) even if it is in contrast to activities in which they would authentically engage. A qualitative study that explored the link between college and post-college drinking found that college students perceive distinct subjective norms and societal attitudes toward heavy drinking in college in comparison to post college graduation (Colby, Colby, & Raymond, 2009). Specifically, themes revealed that the large majority of these students perceived heavy drinking during college to be acceptable, even expected. Students believed their own personal attitudes were consistent with broader societal attitudes. Of the 75 students who participated in this study, all of them endorsed the notion that drinking is sometimes done to not feel left out. If a student is

more extrinsically motivated to make friends (i.e., becoming popular) they may be particularly susceptible to engaging in these risky behaviors.

With the transition to college, many students face increased levels of stress and problems in adjustment to college process. Students may choose to cope using a variety of mechanisms such as social support, exercise, seeking counseling, or drinking. Students who experience poorer college adjustment and have coping drinking motives, are more likely to experience alcohol-related problems (Dyson & Renk, 2006; Weinstein & Laverghetta, 2009). Negative college adjustment was found to mediate the relationship between coping motives and negative alcohol-related consequences, while concurrently controlling for typical weekly drinking (LaBrie, Ehret, Hummer, & Prenovost, 2012). Recent research has suggested that alcohol consequences are partly based on psychological characteristics such as negative affect, a byproduct of poorer college adjustment, rather than just individual drinking behavior (Bonin et al., 2000; Park, 2004; Park & Grant, 2005). Wechsler and colleagues (2002) found that college students who reported past-month alcohol use also reported they did something they regretted (35%). Heavy episodic or binge drinking consists of four or more drinks in a row for women or five or more drinks in a row for men (O'Malley & Johnston, 2002; Wechsler & Nelson, 2008). Heavy drinking among college students is associated with a range of serious primary (e.g., psychological impairment, memory loss, risky sexual behavior, and addiction) and secondary consequences (e.g., academic impairment, sexual victimization, car accidents, violence, and death (Hingson & Zha, 2009). A survey study found that 10.6% of college students reported being hurt or injured because of their drinking, 13.3% were assaulted or hit, 8.4% reported having unprotected sex because of drinking alcohol and 1.5% were victims of a sexual assault or date rape (Wechsler, Lee, Nelson, & Kuo,



2002). These results highlight the importance of negative college adjustment in understanding psychological and physical health outcomes.

Phua's (2011) longitudinal study found that popularity was related to increased smoking and drinking when surrounded by peers engaging in these activities. This was mediated by conforming to peers norms. In other words, the more popular a student is, the higher the likelihood that the student would engage in drinking and smoking when peers did the same. College students are also likely to overestimate the frequency and quantity that their peers are consuming alcohol (Lewis & Neighbors, 2004; Testa, Kearns-Bodkin, & Lingston, 2009). This overestimated value of perceived alcohol consumption is then used to set their own level of drinking (Perkins, Haines, & Rice, 2005). Fournier and colleagues (2013) found that participants who viewed a student's Facebook page, which displayed photos of drinking, estimated the college drinking norms to be much higher than participants who viewed a Facebook page without drinking photos. As previously noted, students who use Facebook for extrinsically motivated reasons have worse adjustment to college if they are trying to accumulate more friends to be viewed as popular (Yang & Brown, 2013). This may be especially detrimental to students who did not have a social engagement to attend and instead spent the night viewing acquaintances Facebook pages with drinking photos. This may lead to students falsely believing that the Hollywood portrayal of a college student is true and the only way to make many friends is to engage in binge drinking.

Heavy alcohol consumption is not the only health risk behavior that can be impacted by inauthenticity. A 14-day diary study explored the link between authenticity of women in dating relationships and their condom usage. Inauthentic women were more likely to not use condoms, particularly on days with frequent negative events with a romantic partner, while authentic

women were more likely to use a condom regardless of negative events (Impett, Breines, & Strachman, 2010). If someone were to go against his or her values (e.g., having unprotected sex) to please their partner, he or she would likely feel a spectrum of negative emotions afterwards.

Money concerns are also another stressor for college students (Archer & Lamnin, 1985). Students who associate money with power and social status (extrinsic motivation) may be more likely to spend compulsively. These students with materialistic views spend more in order to appear as if they own more material goods (i.e., to impress peers), even though it puts them into greater debt (Pinto, Parente, & Palmer, 2000; Roberts & Jones, 2001). A study on high-risk credit behavior in students found that those with more risky behavior spending behavior (e.g., impulse spending, maxing out a credit card, being delinquent on a payment) reported more exhaustion, sadness, and depression. Women with high risky credit behavior also reported higher levels of anxiety and anorexia symptoms (Adams & Moore, 2007). College students who perceive that they can talk with their parents about financial topics such as whether to apply for a credit card and what purchases should they put on credit, reduce their psychological distress and financial stress all while increasing their subjective well-being as they adjust to college life (Serido, Shim, Mishira, & Tang, 2010). This reiterates the importance of open communication and support that goes beyond financial assistance. During the transition to college, the parent-student relationship has a chance to transform from parent-child to parent-emerging adult. Discussions about financial management open a door to a new level of the relationship, offering a training ground upon which the young person can practice financial coping behaviors as well as laying the ground work for a more autonomous parent-emerging adult relationship (Serido, Shim, Mishira, & Tang, 2010).

### **Emotion suppression and self-concealment**

During the adjustment to college process, it is likely that students will feel a range of emotions. Furthermore, when meeting new people at school the individual must decide what and how much they would like to disclose about themselves. The range of the intensity of affect produced by the adjustment to college process can be illustrated through examining the cases of Jack and Jill, both of whom were pressured by their parents into becoming biology majors. As previously suggested, I would expect both students to not expend much energy to truly master and comprehend the material, but rather prepare just for the exam. Examining the individual differences between these two extrinsically motivated students can tell us even more. Jill, who would have chosen to be an art major, is instead a biology major because her parents had selected this for her. Jill is not very bothered by this; no negative emotions arise during classes. She even incorporates art into her study materials making sketches of what is revealed in her dissections. Although, she prefers to be challenged in her artistic abilities and be able to discuss the deeper meaning in her art, she settles and is complacent.

Jack is also extrinsically motivated to major in biology due to his parents' wishes. However, he experiences strong negative affect due to his extrinsically motivated behaviors. He hates biology. He loathes dissecting anything and with every slice of the scalpel he feels more negative emotion. Jack has less to talk about with his intrinsically motivated biology peers who are very excited about the upcoming fetal pig dissection. This negative emotion and lack of things in common with his peers may cause him to either feel ostracized or withdraw from his peers or to conceal his negative emotions and dislike for the topics and act more inauthentically with his peers. The night before the exam, Jack crams. He often catches himself wondering why he has to memorize this boring material which makes him feel frustrated. He grows angrier at his parents as the night progresses. He has to constantly remind himself to shift his focus from

hatred of the material to memorizing it. As seen in the above examples of Jack and Jill, students who are adjusting to college and choose to engage in extrinsically motivated and/or inauthentic behaviors, may experience negative emotions and engage in inauthentic behavior. During each lab and study session, Jack is faced with a dilemma: should he tell his peers that he is disgusted by biology or does he act as if he is enjoying it like the rest of the class? He may be afraid that his peers would react poorly to his authentic self, thus lowering his relatedness and autonomy in that he wishes to express his emotions, but does not. Thus, during the labs, Jack chooses to conceal that he is not actually interested in the dissection and suppresses his negative emotions. Jack may also be hiding his hatred of biology from his parents, thus, lowering his relatedness again. His competence may also be lowered in that he is not enjoying what his parents believe is best for him. Jack may choose to cope by binge drinking or excessive spending, which he may also feel the need to conceal from his parents.

Students may perceive that it would be beneficial to conceal aspects of themselves which they think that others may not approve of and conceal their thoughts to ensure that their parents or peers continue to approve of the students behavior. Self-concealment is conceptualized as the tendency to keep distressing and potentially embarrassing information hidden from others (Cramer & Barry, 1999). Self-concealment is also related to a number of negative health outcomes, such as physical symptoms and psychological distress (Larson & Chastain, 1990), lower overall well-being (Uysal, Lin, & Knee, 2010), and increased pain in college students (Uysal & Lu, 2011). Self-concealment was positively related to stress, anxiety, and physical symptoms as well as negatively related to self-esteem, vitality, life satisfaction, all three of the basic needs, as well as relationship satisfaction with a romantic partner (Uysal, Lin, & Knee, 2010; Uysal, Lin, Knee, & Bush, 2012). As Uysal et al. explained, basic needs are thwarted

when someone chooses to conceal. If a student chooses to hide something from a partner, he or she would feel controlled in his or her interactions with that person leading to a decrease in autonomy. Relatedness would be thwarted due to a less genuine interaction with their partner which may lead to feeling distant. Lastly, if a person is choosing to conceal something he or she may begin to believe that what he or she is concealing is worse than they had previously thought, this leading to a lower self-image and competence. Self-concealment has yet to be studied with regard to college adjustment, although it is likely that a similar association would be revealed in relationships with parents and friends. Thus, it is hypothesized that baseline self-concealment would predict worse adjustment to college at time two as well as more alcohol related problems controlling for baseline outcome variables.

### **Emotion suppression**

Emotion suppression occurs after the emotion has been experienced, and it is the inhibition of the behavioral component of an emotion such as facial movements and verbal expression (Gross, 1998). Srivastava et al. (2009) found that from high school to the first semester of college, emotion suppression increased during this transition period. Furthermore, in the first semester of college emotion suppression was negatively associated with support from new college friends, closeness to others, and social satisfaction even when controlling for high school suppression levels. Emotion suppression is also negatively related to authenticity, social functioning, and satisfaction with life (English & Oliver, 2013). In a 28-day diary study with undergraduates as participants, negative affect suppression was related to decreased self-esteem and negative deactive affect such as sluggishness, sadness, tiredness, boredom, as well as sleepiness (Nezlek & Kuppens, 2008). Furthermore, low levels of expressiveness between first year college students and their families was related to low levels of both social and

personal/emotional aspects of adjustment to college (Johnson, Gans, Kerr, & LaValle, 2010). Thus, it is hypothesized that baseline emotion suppression would predict worse adjustment to college at time 2 as well as more alcohol related problems controlling for baseline outcome variables.

### **Overview and Goals of Proposed Research**

The current study investigated the adjustment to college process through an SDT approach. The study aimed to clarify the theoretical understanding of the adjustment to college process as well as identify potential paths for worse adjustment to college and more alcohol related problems. Participants completed a baseline survey and a one-month follow-up consisting of the same battery of questionnaires. Findings could provide a framework for future research on adjustment to college interventions. The following 2 hypotheses were proposed for this study. The first encompasses SDT variables while the second refers to information/emotional withholding.

#### **Hypothesis 1:**

Higher baseline general needs satisfaction, intrinsic motivation and authenticity will each predict better adjustment to college and less alcohol related problems at time two while controlling for those outcomes at baseline.

#### **Hypothesis 2:**

Higher baseline self-concealment and emotion suppression will predict worse adjustment to college, and more alcohol related problems at time two controlling for baseline outcome variables.

## **Method**

### **Participants and procedure**

Three-hundred and fifty eight male and female students completed both baseline and the one month follow-up questionnaire package. Participants ranged in age from 18-60 (Mean age =

21.82, 87.5% => 25, SD = 5.520, 72.3% female). The sample was ethnically diverse with 30.8% Hispanic, 34.5% Caucasian, 11.0% Black/African American, 31.4% Asian, 5% Multi-Ethnic, 7.9% Native American/American Indian and Pacific Islander and 13.8% Other. Despite recruiting efforts, participants ranged in years of school with 31.7% in their first year, 17.3% in their second, 18.7% in their third and the remaining students 4<sup>th</sup> year or above, and 39.8% reported being a transfer student. Participants were recruited via introductory psychology, health, educational psychology, language, biology, communication, nutrition, construction management, finance, education, and, economics courses at the University of Houston. Flyers for the study were also hung around campus. Before the start of the semester, over 200 professors teaching introduction classes were emailed asking if they would be willing to allow their students to participate in this study and willing to compensate the students with extra credit. Professors who agreed were emailed the link for qualtrics as well as the recruiting script to post on their blackboard web page. The only requirement of this study was that participants be at least 18 years of age. All UH students were eligible to participate as UH has a high transfer rate. Interested students followed a link to the consent form and completed the initial survey packet via [www.qualtrics.com](http://www.qualtrics.com) at a time convenient for them. Their email addresses were entered at the completion of the first survey. At one month post survey one completion, they were emailed the link for the second survey. Each participant received up to three reminders before being dropped from the study and emailed to ask why they did not want to complete the study. No participants responded to the email. To decrease participant burden a question of how much the student drinks was asked. If the student reported they did not consume alcohol in the past month they were not presented with the alcohol related problems measure. Participants who completed the

time 2 survey were then granted credit via Sona if from the psychology pool, or the professor was emailed a list of students who completed the study from their class

## Measures

*Demographics.* Participants reported demographic information such as age, gender, racial background, and year in school.

*General Need Satisfaction.* Need satisfaction was assessed by the 21-item General Need Satisfaction Scale (Deci & Ryan, 2000), which measures satisfaction of autonomy, competence, and relatedness in the general domain of everyday life. Each subscale consists of 7 items. Respondents rated the statements such as, “I feel like I am free to decide for myself how to live my life,” “Most days I feel a sense of accomplishment from what I do,” and “People in my life care about me” on a scale of 1 (strongly disagree) to 7 (strongly agree). Each subscale was scored separately ( $\alpha = .75$  to  $.85$ ) as well as combined into a composite score created ( $\alpha = .88$ )

*Academic Motivations Scale (AMS).* The Academic Motivations Scale (Vallerand et al., 1992) is 28-item scale based on SDT. The AMS assesses three types of academic motivation: intrinsic, extrinsic, and amotivation. The participant was asked to indicate to what extent each of the following items related to why they go to college on a scale of 1 (Does not correspond at all) to 5 (Corresponds Exactly). Intrinsic motivation is measured with 12 items such as “For the pleasure I experience when I discover new things never seen before.” Identified motivation is measured with 4 items such as “Because I believe that a few additional years of education will improve my competence as a worker.” Extrinsic motivation is measured with 4 items such as being “In order to have a better salary later on.” Amotivation is measured with 4 items such as “I can't see why I go to college and frankly, I couldn't care less.” The scale was scored as a single composite of weighted dimensions such that intrinsic motivation was summed and weighted



positive 2x, identified motivation was summed and weighted positive 1x, extrinsic motivation was summed and weighted negative 1x and amotivation was summed and weighted negative 2x ( $\alpha = .94$ ) (Vallerand, Blais, Brière, & Pelletier, 1989). The range of this scale was -6.00 to 9.33.

*Self-Concealment Scale (SCS)*. The SCS is a 10-item scale ( $\alpha = .89$ ) that measures the tendency to conceal personal information from others (Larson & Chastain, 1990). There are five response options ranging from 1 (strongly disagree) to 5 (strongly agree). A sample item is “I have a secret that is so private I would lie if anybody asked me about it.”

*Emotion Regulation Questionnaire (ERQ)*. The ERQ is a 10-item scale with two subscales (Gross & John, 2003). Emotion suppression subscale has 4 items and a sample item is “I control my emotions by not expressing them”;  $\alpha = .75$ . The cognitive reappraisal subscale was not used in this study. Participants rated each item from 1 (strongly disagree) to 7 (strongly agree).

*Authenticity Inventory (AUT3)*. The AUT3 is a 45-item scale that measures dispositional authenticity and has four subscales (Kernis & Goldman, 2006). The Awareness subscale consists of 12 items and measures one’s processing ability and motivation to increase knowledge of his or her internal experiences “For better or for worse I am aware of who I truly am.” The behavioral subscale is an 11 item subscale which examines the tendency to behave in harmony with one’s values and ideas “I find it easy to pretend to be something other than my true-self.” The Relational Orientation subscale contains of 12 items and measures one’s value in being open and honest in close relationships with others a sample item is “I want people with whom I am close to understand my weaknesses.” The Unbiased Processing subscale contains 10 items which measures one’s ability to accurately evaluate characteristics of self without distortion of

incoming external feedback (e.g., "I find it very difficult to critically assess myself"). Items are rated on a 1 (strongly disagree) to 5 (strongly agree) likert scale ( $\alpha = .88$ ).

*Alcohol use. The Quantity/Frequency Scale* (Baer, 1993; Marlatt et al., 1995) is a five item measure assessing the number of drinks and the number of hours spent drinking on a peak drinking event within the past month, as well as the number of days out of the month that alcohol was consumed (0 = *I do not drink at all*, 1 = *about once per month*, 2 = *two to three times a month*, 3 = *once or twice per week*, 4 = *three to four times per week*, 5 = *almost every day*, 6 = *I drink once daily or more*).

*Alcohol-related problems.* The Rutgers Alcohol Problem Index (RAPI; White & Labouvie, 1989) was used to assess negative alcohol-related consequences. The RAPI is a 25-item scale that assesses alcohol-related problems in the previous month. Responses range from *Never* (1) to *10 times or more* (5). The measure was modified to add items related to driving. Items were rated based on how many times each problem occurred while drinking, such as "went to work or school high or drunk."

*Adjustment to College Scale.* The Adjustment to College Scale is a 23 item scale that assessed adjustment to college. There are 4 subscales. The Academic adjustment subscale consists of 7 items and measures the degree to which students have adjusted to meeting academic demands accounting for their attitudes toward their course of study "I enjoy the courses I am taking at the University of Houston." The Personal – emotional adjustment subscale is a 5 item subscale which refers to the effects of the demands of the college environment on stress "I am handling the demands of college well." The Social adjustment subscale contains 4 items and measures how well students have integrated themselves into the social arena of the university a

sample item is “I attend social activities on campus.” The Institutional attachment subscale contains 5 items which measures how emotionally attached and personally identified a student is with the university (e.g., “I am proud to be a cougar.”). There are an additional 2 items that were used in determining overall adjustment to college (“I feel like I belong at the University of Houston.”). Items are rated on a 1 (strongly disagree) to 5 (strongly agree) likert scale ( $\alpha = .80$ ).

## **Results**

### **Descriptive Analyses**

Using SPSS, preliminary data analyses were conducted in order to examine descriptive statistics of the sample, outliers, distribution of variables, missing data and to ensure that statistical assumptions were met. Of participants who completed the baseline survey 66% of students’ completed the follow up survey and will now be referred to as completers. Attrition analyses were conducted using T-tests for continuous variables (age, GPA, outcomes and predictors) and using chi-square for categorical variables (gender, ethnicity, race, transfer student, living on or off campus, fraternity or sorority membership, work status, religious affiliation, and relationship status) to examine the differences between those who completed both baseline and time two variables (i.e., completers) and those who did not complete the time two (i.e., non-completers). No differences emerged between the completers and the non-completers.

Means, standard-deviations and bivariate correlations at baseline are presented in Table 1. Time 2 means, standard deviations and bivariate correlations are presented in Table 2. Table 3 presents bivariate correlations between baseline and time 2 variables. At baseline adjustment to college was positively associated with general needs satisfaction, motivation and authenticity and negatively related to, self-concealment and drinking-related problems. These relationships were also revealed at time 2 as well as baseline with time 2. At baseline drinking-related problems

were significantly positively related to self-concealment, and negatively related to general needs satisfaction motivation and authenticity. All baseline variables revealed the same associations with time 2 drinking related problems however, no relationship was found for time 2 drinking related problems and baseline adjustment to college. Baseline emotion suppression was not significantly related to time 1 or time 2 adjustment to college or alcohol related problems. The achievement indicator of college GPA was related to positively to baseline motivation, baseline adjustment to college, and negatively related to time 2 alcohol related problems.

### **Primary analyses**

Each hypothesis was tested with multiple regression residual change analyses (Cohen, Cohen, West, & Aiken, 2003). Each time 2 criterion was predicted by the independent variables at baseline and then repeated controlling for the baseline value of the criterion. Controlling for the baseline value removes its predictive influence. For example, to address hypothesis 1 that higher baseline general needs satisfaction, motivation and authenticity would each predict better adjustment to college and less alcohol related problems at time 2 while controlling for those outcomes at baseline, four sets of regression analyses were conducted. In the first regression analysis, baseline general need satisfaction, motivation, and authenticity were entered as predictors of time 2 adjustment to college. The second regression equation included the same baseline predictors as well as controlled for baseline levels of adjustment to college. The same series of analyses were repeated for alcohol related problems as the criterion. Hypothesis 2 was tested in the same way. To address concerns about multicollinearity, a test of test the tolerance was performed with each regression analysis.

Results of the initial regression analysis partially supported the first hypothesis that general needs satisfaction, motivation and authenticity, would predict time 2 adjustment to

college. Time 2 adjustment to college was significantly predicted by baseline needs satisfaction  $\beta = .350, p = .001$ , and motivation  $\beta = .168, p = .002$ , but not authenticity  $\beta = -.094, p = .140$  (Table 4.). Results were no longer significant when controlling for baseline adjustment to college.

Additional exploratory analysis was conducted to examine if baseline authenticity alone predicted time 2 adjustment to college. Results revealed a significant positive prediction  $\beta = .177, p = .001$ , however results were no longer significant when controlling for baseline adjustment. A second set of regression analysis were performed to test the second outcome in hypothesis 1, that general needs satisfaction, motivation and authenticity, would predict time 2 alcohol related problems. Time 2 alcohol related problems were significantly predicted by motivation,  $\beta = -.192, p = .019$ , and authenticity,  $\beta = -.226, p = .022$ , but not general needs satisfaction  $\beta = .005, p = .962$  (Table 4). Results remained when controlling for baseline alcohol related problems.

Regression analysis also addressed the second hypothesis that higher baseline self-concealment and emotion suppression would predict lower adjustment to college at time 2. Results revealed that time 2 adjustment to college was significantly negatively predicted by baseline self-concealment,  $\beta = -.215, p = .001$ , but not emotion suppression,  $\beta = .033, p = .568$  (Table 5). Results remained when controlling for baseline adjustment to college. A second set of regression analysis partially supported the hypothesis that higher baseline self-concealment and emotion suppression would predict alcohol related problems at time 2. Results revealed that time 2 alcohol related problems was significantly negatively predicted by baseline self-concealment  $\beta = -.202, p = .021$ , but not emotion suppression,  $\beta = -.006, p = .941$  (Table 5). Results no longer persisted when controlling for baseline alcohol related problems. Additional exploratory analyses

were run which examined emotion suppression as a single predictor of both adjustment to college and drinking related problems, but results were not significant.

### **Discussion**

Overall implications of these findings extend previous literature by examining the theoretical understanding of the adjustment to college process. The goal of this study was to understand the process of adjustment to college through a SDT approach. More specifically, the roles that motivation, basic need fulfillment, and behaving in accordance with one's authentic self as well as self-concealment and emotion suppression play in the adjustment to college process, and in the realm of alcohol related problems. Results revealed that need fulfillment, motivation, and self-concealment at baseline predict adjustment to college at one month follow-up, however, only self-concealment remains a significant predictor when controlling for baseline adjustment. Moreover, alcohol related problems were predicted by motivation, authenticity, and self-concealment, however, self-concealment was no longer significant when controlling for baseline alcohol related problems. The findings provide evidence that motivation, need fulfillment, authenticity and self-concealment do shed light on students who are likely to experience adjustment to college and alcohol related problems. These findings may help to inform future college adjustment programs.

### **Motivation**

Evidence supported the expectation that baseline motivation would predict time 2 adjustment to college and predict alcohol related problems. The finding that intrinsically motivated students are better adjusted to college is consistent with previous research in that those who are more intrinsically motivated report lower levels of stress during the adjustment process and better adjustment. (Baker, 2003, 2004). However, this was no longer significant after

controlling for baseline adjustment. It is possible that adjustment to college baseline and time 2 were highly correlated and a one month follow up did not allow for much variation in the adjustment to college process. Furthermore, those who are more intrinsically motivated may more readily integrate themselves into the university such as being involved with activities at the university, being proud to be a cougar, and feeling as if they belong at the university, which are all aspects of adjusting to college thus by spring semester, they are already well adjusted. Moreover, drinking related problems was predicted by lower intrinsic motivation. Previous research has revealed a similar relationship in high school students and alcohol consumption amounts (Wormington, Anderson, & Corpus, 2012). It is possible that students who are amotivated or extrinsically motivated are dealing with the internal turmoil of understanding why they are in college or pressures of trying to get an “A” and may choose to drink to cope. Previous research has demonstrated that drinking to cope has been shown to mediate the relationship between stress and alcohol related problems in college students (Rice, & Van Arsdale, 2010).

### **General Needs Satisfaction**

Results supported the expectation that time 2 adjustment to college would be predicted by baseline needs satisfaction, however, results were no longer significant when controlling for baseline adjustment to college. Moreover, general needs satisfaction did not predict time 2 alcohol related problems. It is possible that those with high baseline needs fulfillment engage in behavior that facilitate adjustment to college such as spending more time on classwork and have a balance between friends, school, family, and work (Chen & Jang, 2010; Conti, 2000; Milyavskaya et al., 2009). Whereas for the alcohol related problems, it’s possible that there is a mediator, such as drinking motives (Cooper, 1994). For example, if a student is not getting invited to a party in which he or she wants to attend this may thwart their needs fulfillment. If the

student is high on social drinking motives then he or she is likely to not drink that night, thus lowering his or her alcohol related problems. However, if the individual is high in coping drinking motives he or she may be more likely to over consume alcohol, thus leading to potential problems. On the other hand, if the student did get in to the party his or her needs fulfillment would be increased. A student who is high in social or conformity drinking motives may consume more alcohol to fit in or to enjoy the party more, thus, having the potential to have more alcohol related problems.

### **Authenticity**

Results did not support the expectation that time 2 adjustment to college would be predicted by baseline authenticity while controlling for motivation and general needs satisfaction, however, this was a significant predictor of adjustment to college when needs satisfaction and motivation were no longer controlled for. Thus, motivation, general needs satisfaction, and baseline adjustment are stronger predictors, accounting for more variance in the adjustment to college process. This may be due to the strong overlap of the concepts. Perhaps the authenticity and adjustment to college relationship is more complex than originally hypothesized. For instance, if an individual is engaging in authentic behavior and is not received well from his or her peers and the university the student may report lower adjustment to college despite acting in accordance with one's authentic self. Possibly there is an underlying mediator "matching environments" where the environment must be in congruence with the individual to allow authenticity to foster adjustment to college. It is plausible that some of the participants did not authentically desire to attend UH but rather enrolled due to its proximity to family or relatively low cost. Results did provide evidence for baseline authenticity predicting time 2 alcohol related problems. This is consistent with previous research in that inauthentic individuals were more



likely to engage in risky behavior (Impett, Breines, & Strachman, 2010). It is likely that those who are less authentic may be more prone to caving into peer pressure to drink heavily and engage in reckless behavior even when it is against their better judgment.

### **Emotion Suppression**

Results did not support the hypothesis that baseline emotion suppression would predict time 2 adjustment to college and alcohol related problems. Previous research has demonstrated that during the transition from high school to the first semester of college, emotion suppression increased. Additionally, in the first semester of college emotion suppression was negatively associated with support from new college friends, closeness to others, and social satisfaction even when controlling for high school suppression levels (Srivastava et al., 2009). However, the study aforementioned was less ethnically diverse and reported less emotion suppression than the sample in the current study. Consistent with previous research, African Americans, Asian Americans, and Latinos report greater use of suppression than the European-American (Gross, John, 2003). Previous research has demonstrated that when those with western-European values suppress this produces negative feelings along with negative partner-perceptions and hostile behavior. Meanwhile, the effect was less profound when an individual identified more with Asian values (Butler, Lee, & Gross, 2007). Thus, in this sample, suppression may be less detrimental to the adjustment process compared to previous samples. With regard to alcohol related problems, motivation for drinking may be an underlying mechanism. Some individuals high in suppression may choose to consume copious amounts of alcohol as a social lubricant, to help them better connect with their peers, while others may avoid heavy alcohol consumption in fear of emotion expression.

### **Self-Concealment**

Evidence supported that baseline self-concealment predicted time 2 adjustment to college, results remained when controlling for baseline adjustment to college. Moreover, time 2 alcohol related problems were also predicted by self-concealment however, results were no longer significant when controlling for baseline alcohol related problems. This is consistent with previous literature that self-concealment is related to a number of negative health outcomes, such as physical symptoms and psychological distress (Larson & Chastain, 1990), lower overall well-being (Uysal, Lin, & Knee, 2010), and increased pain in college students (Uysal & Lu, 2011). It is likely that students do not feel as if they can truly integrate themselves with the university if they are actively concealing something. Another possible avenue is that the student is open with whatever they are concealing at school such as they are gay, transgendered, have a different religious view than their family, or that the individual is not majoring in what their parents want them to. This paradoxical freedom in one domain and concealment in another may also lead to increased stress and worse adjustment to college. Additional alcohol related problems may arise from drinking to cope with the burden of concealing.

### **Limitations and Future Directions**

The strengths of this study should be considered in light of its limitations. Despite the sample being recruited from diverse introductory university classes the participants were not limited to freshman, incoming transfer students, and students returning to college. It is possible that if students participated in the study when they were first incoming to UH that there would have been more of a change in adjustment to college. Moreover, the follow-up may not have been long enough to capture changes in adjustment to college as there was little change in adjustment to college at baseline and time 1 as seen in the means and correlations. This study had two time points one month apart which did not allow for investigation of how these variables

related to adjustment to college and alcohol related problems on a day to day basis. It is plausible that if an individual experienced a day with very low authenticity or very high emotion suppression he or she may be more likely to engage in heavy alcohol consumption leading to problems or report much lower adjustment to college. Future studies may wish to investigate this with a daily diary study. Furthermore, the study was simply self-reported data. A laboratory study manipulating these variables may lead to a deeper understanding of the impact on adjustment to college and alcohol related problems.

Future research may wish to investigate an authenticity/motivation intervention. Having students write about who they authentically are and how they themselves are integrated in the university may bring awareness to who they authentically are and may increase authentic behavior and autonomy. Writing about why the student is enrolled at the university may help the student integrate themselves with the college identity possibly allowing the student to feel more intrinsically motivated and autonomous and related. Future research may also wish to investigate a welcome week intervention that aims to incorporate needs fulfillment such as making new friends, or simply talking to strangers, making a plan for success (working on time and task management), a campus scavenger hunt. Focusing interventions on motivation, authenticity, and general needs satisfaction could help future students adjust to college more easily and lower the amount of alcohol related problems experienced.

Table 1.

*Means, Standard Deviations, and Correlations among Variables at Time 1.*

	1	2	3	4	5	6	7
1. GNS	--						
2. Motivation	.38**	--					
3. Authenticity	.62**	.30**	--				
4. Suppression	-.41**	-.12*	-.35**	--			
5. Self-Concealment	-.47**	-.15**	-.46**	.40**	--		
6. Adjustment to College	.43**	.37**	.19**	-0.04	-.17**	--	
7. Drinking Related Problems	-.22**	-0.13	-.17*	-0.03	.16*	-0.13	--
Mean	5.14	4.08	3.59	14.47	2.83	3.47	28.18
Standard Deviation	0.83	2.70	0.40	5.16	1.02	0.45	6.32

Note. N = 358 and N = 156 for Drinkers \*\*  $p < .01$ . \*  $p < .05$ . †  $p < .10$

Table 2.

*Means, Standard Deviations, and Correlations among Variables at Time 2.*

	1	2	3	4	5	6	7
1. GNS	--						
2. Motivation	0.40**	--					
3. Authenticity	0.70**	0.29**	--				
4. Suppression	-0.42**	-0.10**	-0.46**	--			
5. Self-Concealment	-0.51**	-0.15**	-0.57**	0.40**	--		
6. Adjustment to College	0.39**	0.36**	0.26**	-0.17**	-0.22**	--	
7. Drinking Related Problems	-0.26**	-0.25**	-0.26**	0.09	0.29**	-0.20**	--
Mean	5.40	3.53	3.58	14.70	2.80	3.40	27.54
Standard Deviation	0.83	2.71	0.42	5.11	1.06	0.48	5.12

Note. N = 358 and N = 156 for Drinkers \*\*  $p < .01$ . \*  $p < .05$ . †  $p < .10$

# ADJUSTMENT TO COLLEGE

Table 3.

*Means, Standard Deviations, and Correlations among Variables at Time 1 and Time 2. Baseline is on the left time 2 is across the top*

BASELINE	TIME 2 1	2	3	4	5	6	7
1. GNS	0.80**	0.37**	0.62**	-0.33**	-0.44**	0.36**	-0.19**
2. Motivation	0.27**	0.74**	0.23**	-0.07	-0.12**	0.27**	-0.24**
3. Authenticity	0.60**	0.29**	0.80**	-0.37**	-0.42**	0.18**	-0.26**
4. Suppression	-0.41**	-0.14**	-0.40**	0.63**	0.39**	-0.05	0.07
5. Self-Concealment	-0.46**	-0.15**	-0.50**	0.34**	0.78**	-0.20**	0.20**
6. Adjustment to College	0.34**	0.33**	0.22**	-0.14**	-0.19**	0.69**	-0.12
7. Drinking Related Problems	-0.19**	-0.16**	-0.24**	0.01	0.11	-0.15**	0.34**

Note. N = 358 and N = 156 for Drinkers \*\*  $p < .01$ . \*  $p < .05$ . †  $p < .10$

## ADJUSTMENT TO COLLEGE

Table 4.

*Residual change analyses for adjustment to college and drinking related problems*

Criterion		Predictor	B	SE B	$\beta$	Tolerance	VIF
Adjustment to College	Step 1	GNS	.205	.038	.350***	.571	1.751
		Motivation	.030	.010	.168**	.840	1.190
		Authenticity	-.112	.076	-.094	.606	1.651
	Step 2	GNS	.722	.049	.662	.750	1.333
		Motivation	.034	.032	.058	.498	2.007
		Authenticity	.002	.008	.013	.786	1.272
		Baseline Adjustment	.004	.060	.003***	.596	1.678
Alcohol Related Problems	Step 1	GNS	.034	.713	.005	.584	1.712
		Motivation	-.379	.159	-.192*	.905	1.105
		Authenticity	-3.020	1.303	-.226*	.618	1.617
	Step 2	GNS	.426	.701	.060	.585	1.708
		Motivation	-.416	.160	-.207**	.904	1.107
		Authenticity	-2.776	1.271	-.209*	.626	1.597
		Baseline Problems	.348	.090	.299***	.959	1.043

Note. N = 358 and N = 156 for Drinkers \*\*\*  $p < .001$  \*\*  $p < .01$  \*  $p < .05$ .†  $p < .10$

# ADJUSTMENT TO COLLEGE

Table 5.

*Residual change analyses for variables adjustment to college and drinking related problems*

Criterion		Predictor	B	SE B	$\beta$	Tolerance	VIF
Adjustment to College	Step 1	Conceal	-.097	.026	-.215***	.847	1.181
		Suppression	.003	.005	.033	.847	1.181
	Step 2	Conceal	-.039	.019	-.085*	.820	1.219
		Suppression	.001	.004	.013	.846	1.182
		College	.739	.043	.678***	.967	1.034
Alcohol Related Problems	Step 1	Conceal	.991	.425	.202*	.843	1.187
		Suppression	-.007	.088	-.006	.843	1.187
	Step 2	Conceal	.656	.429	.132	.821	1.218
		Suppression	.041	.088	.040	.839	1.192
		Problems	.373	.093	.319***	.965	1.036

Note. N = 358 and N = 156 for Drinkers \*\*\* p < .001 \*\* p < .01 \* p < .05.† p < .10



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## Questionnaires

### Demographics

Instructions: Please read each question carefully and select the most accurate response.

1. **Age:** \_\_\_\_\_ years
2. **Sex:** ☐ Male ☐ Female
3. **Ethnic Background:**  
☐ Hispanic/Latino ☐ Nonhispanic
4. **Racial Background:**  
☐ White/Caucasian  
☐ Native American/American Indian  
☐ Black/African American  
☐ Asian  
☐ Native Hawaiian/ Pacific Islander  
☐ Multi-Ethnic  
☐ Other
5. **What is your year in school?**  
☐ 1<sup>st</sup> year ☐ 2<sup>nd</sup> year ☐ 3<sup>rd</sup> year  
☐ 4<sup>th</sup> year ☐ 5<sup>th</sup> year ☐ 6<sup>th</sup> year  
☐ 7<sup>th</sup> year ☐ more
6. **Class Standing:**  
☐ Freshman  
☐ Sophomore  
☐ Junior  
☐ Senior
7. **Student Status:**  
☐ Part-time (1-11 credits)  
☐ Full-time (12+ credits)
8. **Most recent Semester's GPA (Write N/A if this does not apply to you):** \_\_\_\_\_
9. **Where you are living this semester:**  
☐ Residence Halls/Dorm Room  
☐ Fraternity/Sorority House  
☐ Off-Campus Housing/Apartment/House  
☐ With Parents
10. **Are you currently a Fraternity or Sorority Member?** ☐ Yes ☐ No
11. **Work Status:**  
☐ I do not work  
☐ Working part-time  
☐ Working full-time
12. **Religious Affiliation?**  
☐ Christian  
☐ Jewish  
☐ Hindu  
☐ Buddhist  
☐ Muslim/Islam  
☐ Agnostic  
☐ Atheist  
☐ Non-religious/secular  
☐ Other (specify) \_\_\_\_\_
13. **Christian Denomination?**  
☐ Catholic  
☐ Baptist  
☐ Methodist  
☐ Lutheran  
☐ Presbyterian  
☐ Episcopal  
☐ Other (specify) \_\_\_\_\_  
☐ Not applicable
14. **Relationship Status?**  
☐ Single, not dating  
☐ Single, casual dating  
☐ Single, exclusively dating  
☐ Engaged  
☐ Married/Life partner
15. **If you are currently in a relationship, do you live with your partner?**  
☐ Yes ☐ No ☐ Not applicable

## Motivations for College

Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to college.

I Go To College....	Does Not Correspond At All	Corresponds A Little	Corresponds Moderately	Corresponds A Lot	Corresponds Exactly
1. Because with only a high-school degree I would not find a high-paying job later on.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Because I experience pleasure and satisfaction while learning new things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Because I think that a college education will help me better prepare for the career I have chosen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. For the intense feelings I experience when I am communicating my own ideas to others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Honestly, I don't know; I really feel that I am wasting my time in school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. For the pleasure I experience while surpassing myself in my studies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. To prove to myself that I am capable of completing my college degree.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. In order to obtain a more prestigious job later on.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. For the pleasure I experience when I discover new things never seen before.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Because eventually it will enable me to enter the job market in a field that I like.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. For the pleasure that I experience when I read interesting authors.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I once had good reasons for going to college; however, now I wonder whether I should continue.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Because of the fact that when I succeed in college I feel important.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Because I want to have "the good life" later on.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. For the pleasure that I experience in broadening my knowledge about subjects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## ADJUSTMENT TO COLLEGE

I Go To College....	Does Not Correspond At All	Corresponds A Little	Corresponds Moderately	Corresponds A Lot	Corresponds Exactly
which appeal to me.					
17. Because this will help me make a better choice regarding my career orientation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. For the pleasure that I experience when I feel completely absorbed by what certain authors have written.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. I can't see why I go to college and frankly, I couldn't care less.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. To show myself that I am an intelligent person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. In order to have a better salary later on.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Because my studies allow me to continue to learn about many things that interest me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Because I believe that a few additional years of education will improve my competence as a worker.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. For the "high" feeling that I experience while reading about various interesting subjects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. I don't know; I can't understand what I am doing in school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Because college allows me to experience a personal satisfaction in my quest for excellence in my studies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. Because I want to show myself that I can succeed in my studies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Authenticity Scale AUT3**

The following measure has a series of statements that involve people's perceptions about themselves. There are not right or wrong responses, so please answer honestly. Respond to each statement by writing the number from the scale below, which you feel most accurately characterizes your response to the statement.

1= Strongly disagree

2=Disagree

3= Neither Agree Nor Disagree

4= Agree

5=Strongly Agree

- 1 1. I am often confused about my feelings.
- 2 2. For better or for worse I am aware of who I truly am.
- 3 I understand why I believe the things I do about myself.
- 4 I actively try to understand which of my self-aspects fit together to form my core- or true-self.
- 5 I have a very good understanding of why I do the things I do.
- 6 I am not in touch with my deepest thoughts and feelings.
- 7 I am aware of when I am not being my true-self.
- 8 I am able to distinguish those self-aspects that are important to my core- or true-self from those that are unimportant.
- 9 I actively attempt to understand myself as best as possible.
- 10 I frequently am not in touch with what's important to me.
- 11 I often question whether I really know what I want to accomplish in my lifetime.
- 12 I am in touch with my motives and desires.
- 13 I am very uncomfortable objectively considering my limitations and shortcomings
- 14 I find it very difficult to critically assess myself.
- 15 I tend to have difficulty accepting my personal faults, so I try to cast them in a more positive way.
- 16 I prefer to ignore my darkest thoughts and feelings.
- 17 I'd rather feel good about myself than objectively assess my personal limitations and shortcomings.
- 18 I try to block out any unpleasant feelings I might have about myself.
- 19 I often find that I am overly critical about myself.
- 20 I often deny the validity of any compliments that I receive.
- 21 I find it difficult to embrace and feel good about the things I have accomplished.
- 22 If someone points out or focuses on one of my shortcomings I quickly try to block it out of my mind and forget it.
- 23 I frequently pretend to enjoy something when in actuality I really don't.
- 24 I've often used my silence or head-nodding to convey agreement with someone else's

statement or position even though I really disagree.

- 25 I am willing to change myself for others if the reward is desirable enough.
- 26 I find it easy to pretend to be something other than my true-self.
- 27 I try to act in a manner that is consistent with my personally held values, even if others criticize or reject me for doing so.
- 28 I've often done things that I don't want to do merely not to disappoint people.
- 29 I find that my behavior typically expresses my values.
- 30 I find that my behavior typically expresses my personal needs and desires.
- 31 I rarely if ever, put on a "false face" for others to see.
- 32 I spend a lot of energy pursuing goals that are very important to other people even though they are unimportant to me.
- 33 I am willing to endure negative consequences by expressing my true beliefs about things.
  
- 34 I want people with whom I am close to understand my strengths.
- 35 I want people with whom I am close to understand my weaknesses.
- 36 I make it a point to express to close others how much I truly care for them.
- 37 I tend to idealize close others rather than objectively see them as they truly are.
- 38 If asked, people I am close to can accurately describe what kind of person I am.
- 39 People close to me would be shocked or surprised if they discovered what I keep inside me.
- 40 It is important for me to understand my close others' needs and desires.
- 41 I want close others to understand the real me rather than just my public persona or "image."
- 42 If a close other and I are in disagreement I would rather ignore the issue than constructively work it out.
- 43 In general, I place a good deal of importance on people I am close to understanding who I truly am.
- 44 The people I am close to can count on me being who I am regardless of what setting we are in.
- 45 My openness and honesty in close relationships are extremely important to me.



### General Need Satisfaction.

Feelings I have

Please read each of the following items carefully, thinking about how it relates to your life, and then indicate how true it is for you. Use the following scale to respond:

1	2	3	4	5	6	7
not at all true			somewhat true			very true

1. I feel like I am free to decide for myself how to live my life.
2. I really like the people I interact with.
3. Often, I do not feel very competent.
4. I feel pressured in my life.
5. People I know tell me I am good at what I do.
6. I get along with people I come into contact with.
7. I pretty much keep to myself and don't have a lot of social contacts.
8. I generally feel free to express my ideas and opinions.
9. I consider the people I regularly interact with to be my friends.
10. I have been able to learn interesting new skills recently.
11. In my daily life, I frequently have to do what I am told.
12. People in my life care about me.
13. Most days I feel a sense of accomplishment from what I do.
14. People I interact with on a daily basis tend to take my feelings into consideration.
15. In my life I do not get much of a chance to show how capable I am.
16. There are not many people that I am close to.
17. I feel like I can pretty much be myself in my daily situations.
18. The people I interact with regularly do not seem to like me much.
19. I often do not feel very capable.
20. There is not much opportunity for me to decide for myself how to do things in my daily life.
21. People are generally pretty friendly towards me.

**Self-concealment scale (scs)**

<p>This scale measures self-concealment, defined here as a tendency to conceal from others personal information that one perceives as distressing or negative. Please tick the box, to the right of each of the following 10 statements, that best describes how much you personally agree or disagree with the statement.</p>		<i>1=strongly disagree</i>	<i>2=moderately disagree</i>	<i>3=don't disagree or agree</i>	<i>4=moderately agree</i>	<i>5=strongly agree</i>
<i>1.</i>	I have an important secret that I haven't shared with anyone					
<i>2.</i>	if I shared all my secrets with my friends, they'd like me less					
<i>3.</i>	there are lots of things about me that I keep to myself					
<i>4.</i>	some of my secrets have really tormented me					
<i>5.</i>	when something bad happens to me, I tend to keep it to myself					
<i>6.</i>	I'm often afraid I'll reveal something I don't want to					
<i>7.</i>	telling a secret often backfires and I wish I hadn't told it					
<i>8.</i>	I have a secret that is so private I would lie if anybody asked me about it					
<i>9.</i>	my secrets are too embarrassing to share with others					
<i>10.</i>	I have negative thoughts about myself that I never share with anyone					

## Emotion Regulation Questionnaire (ERQ)

The Emotion Regulation Questionnaire is designed to assess individual differences in the habitual use of two emotion regulation strategies: cognitive reappraisal and expressive suppression.

### Instructions and Items

We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. The questions below involve two distinct aspects of your emotional life. One is your emotional experience, or what you feel like inside. The other is your emotional expression, or how you show your emotions in the way you talk, gesture, or behave. Although some of the following questions may seem similar to one another, they differ in important ways. For each item, please answer using the following scale:

1-----2-----3-----4-----5-----6-----7 strongly  
neutral strongly disagree agree

1. \_\_\_\_ When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.
2. \_\_\_\_ I keep my emotions to myself.
3. \_\_\_\_ When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about.
4. \_\_\_\_ When I am feeling positive emotions, I am careful not to express them.
5. \_\_\_\_ When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.
6. \_\_\_\_ I control my emotions by not expressing them.
7. \_\_\_\_ When I want to feel more positive emotion, I change the way I'm thinking about the situation.
8. \_\_\_\_ I control my emotions by changing the way I think about the situation I'm in.
9. \_\_\_\_ When I am feeling negative emotions, I make sure not to express them.
10. \_\_\_\_ When I want to feel less negative emotion, I change the way I'm thinking about the situation.

### **Adjustment to college Scale**

**Directions:** The following measure has a series of statements that refer to your experience at college. There are not right or wrong responses, so please answer honestly. Respond to each statement by writing the number from the scale below, which you feel most accurately characterizes your response to the statement.

1= Strongly disagree

2=Disagree

3= Neither Agree Nor Disagree

4= Agree

5=Strongly Agree

1. I enjoy the courses I am taking at the University of Houston
2. I can keep up with my course work.
3. I am able to adapt to the demands of my new schedule.
4. I am overwhelmed with my role as a college student. (Negative)
5. I balance my hours spent studying with fun activities.
6. I actively participate in discussion during my classes.
7. I procrastinate. (Negative)
8. I am handling the demands of college well.
9. I feel mentally healthy at the University of Houston.
10. I feel physically healthy at the University of Houston.
11. Sometimes I can't stop thinking about how much work I have to do. (Negative)
12. I worry that I will let down my parents.
13. I have friends at the University of Houston.
14. I am involved with activities at the University of Houston
15. I attend social activities on campus.
16. I am involved in a club, intermural sport, sorority or fraternity.
17. I am proud to be a cougar.
18. I intend to graduate from the University of Houston with my bachelor's degree.
19. When first meeting someone, I often mention that I am a student at UH.
20. I enjoy showing school spirit.
21. When something negative happens at UH, I take it personally.
22. I feel like I belong at the University of Houston.
23. I made the right choice in attending the University of Houston.

NEVER 1 TO 2 TIMES 3 TO 5 TIMES 6 TO 10 TIMES MORE THAN 10 TIMES	<div style="border: 2px solid black; padding: 10px;"> <p><b>Directions:</b></p> <p>How many times did the following things happen to you <u>while</u> you were drinking or <u>because of</u> your alcohol use during the <b>last month</b>?</p> <p>Circle the number corresponding to your answer.</p> </div>	Rutg
1 2 3 4 5	1. Not able to do your homework or study for a test?	
1 2 3 4 5	2. Got into fights, acted bad, or did mean things?	
1 2 3 4 5	3. Missed out on other things because you spent too much money on alcohol?	
1 2 3 4 5	4. Went to work or school high or drunk?	
1 2 3 4 5	5. Caused shame or embarrassment to someone?	
1 2 3 4 5	6. Neglected your responsibilities?	
1 2 3 4 5	7. Relative avoided you?	
1 2 3 4 5	8. Felt that you needed more alcohol than you used to use in order to get the same effect?	
1 2 3 4 5	9. Tried to control your drinking by trying to drink only at certain times of the day or in certain places?	
1 2 3 4 5	10. Had withdrawal symptoms, that is, felt sick because you stopped or cut down on drinking?	
1 2 3 4 5	11. Noticed a change in your personality?	
1 2 3 4 5	12. Felt that you had a problem with alcohol?	
1 2 3 4 5	13. Missed a day (or part of a day) of school or work?	
1 2 3 4 5	14. Tried to cut down or quit drinking?	
1 2 3 4 5	15. Suddenly found yourself in a place that you could not remember getting to?	
1 2 3 4 5	16. Passed out or fainted suddenly?	
1 2 3 4 5	17. Had a fight, argument or bad feelings with a friend?	
1 2 3 4 5	18. Had a fight, argument or bad feelings with a family member?	
1 2 3 4 5	19. Kept drinking when you promised yourself not to?	
1 2 3 4 5	20. Felt you were going crazy?	
1 2 3 4 5	21. Had a bad time?	
1 2 3 4 5	22. Felt physically or psychologically dependent?	
1 2 3 4 5	23. Was told by a friend or neighbor to stop or cut down drinking?	
1 2 3 4 5	24. Drove shortly after having more than two drinks?	
1 2 3 4 5	25. Drove shortly after having more than four drinks?	

**Quantity/Frequency/Peak Alcohol Use Index**

For all questions, **one drink equals:**

- 5oz. wine
- 12oz. wine cooler
- 12oz. beer (10oz. of Microbrew; 8-9 oz. Malt Liquor, Canadian beer or Ice beer)
- 6oz. Ice Malt Liquor
- 1 Cocktail with 1 oz. of 100 proof liquor or 1 ½ oz. (single jigger) of 80 proof liquor.

1. Think of the **occasion you drank the most** this **past month**. How **much** did you drink?

- |                                   |                                    |                                    |                                    |                                     |
|-----------------------------------|------------------------------------|------------------------------------|------------------------------------|-------------------------------------|
| <input type="checkbox"/> 0 drinks | <input type="checkbox"/> 6 drinks  | <input type="checkbox"/> 11 drinks | <input type="checkbox"/> 16 drinks | <input type="checkbox"/> 21 drinks  |
| <input type="checkbox"/> 1 drink  | <input type="checkbox"/> 7 drinks  | <input type="checkbox"/> 12 drinks | <input type="checkbox"/> 17 drinks | <input type="checkbox"/> 22 drinks  |
| <input type="checkbox"/> 2 drinks | <input type="checkbox"/> 8 drinks  | <input type="checkbox"/> 13 drinks | <input type="checkbox"/> 18 drinks | <input type="checkbox"/> 23 drinks  |
| <input type="checkbox"/> 3 drinks | <input type="checkbox"/> 9 drinks  | <input type="checkbox"/> 14 drinks | <input type="checkbox"/> 19 drinks | <input type="checkbox"/> 24 drinks  |
| <input type="checkbox"/> 4 drinks |                                    |                                    |                                    | <input type="checkbox"/> 25+ drinks |
| <input type="checkbox"/> 5 drinks | <input type="checkbox"/> 10 drinks | <input type="checkbox"/> 15 drinks | <input type="checkbox"/> 20 drinks |                                     |

2. Think of the **occasion you drank the most** this **past month**. How **many HOURS** did you spend drinking on that occasion?

- |                              |                              |                              |                               |
|------------------------------|------------------------------|------------------------------|-------------------------------|
| <input type="checkbox"/> 0-1 | <input type="checkbox"/> 3-4 | <input type="checkbox"/> 6-7 | <input type="checkbox"/> 9-10 |
| <input type="checkbox"/> 1-2 | <input type="checkbox"/> 4-5 | <input type="checkbox"/> 7-8 | <input type="checkbox"/> 10+  |
| <input type="checkbox"/> 2-3 | <input type="checkbox"/> 5-6 | <input type="checkbox"/> 8-9 |                               |

3. On a given **weekend evening** during the **past month**, how **much** alcohol did you typically drink? Estimate for the past month.

- |                                   |                                    |                                    |                                    |                                    |
|-----------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <input type="checkbox"/> 0 drinks | <input type="checkbox"/> 6 drinks  | <input type="checkbox"/> 11 drinks | <input type="checkbox"/> 16 drinks | <input type="checkbox"/> 21 drinks |
| <input type="checkbox"/> 1 drink  | <input type="checkbox"/> 7 drinks  | <input type="checkbox"/> 12 drinks | <input type="checkbox"/> 17 drinks | <input type="checkbox"/> 22 drinks |
| <input type="checkbox"/> 2 drinks | <input type="checkbox"/> 8 drinks  | <input type="checkbox"/> 13 drinks | <input type="checkbox"/> 18 drinks | <input type="checkbox"/> 23 drinks |
| <input type="checkbox"/> 3 drinks | <input type="checkbox"/> 9 drinks  | <input type="checkbox"/> 14 drinks | <input type="checkbox"/> 19 drinks | <input type="checkbox"/> 24 drinks |
| <input type="checkbox"/> 4 drinks |                                    |                                    |                                    | <input type="checkbox"/> 25+ drink |
| <input type="checkbox"/> 5 drinks | <input type="checkbox"/> 10 drinks | <input type="checkbox"/> 15 drinks | <input type="checkbox"/> 20 drinks |                                    |

4. On a given **weekend evening** during the **past month**, how **many HOURS** did you spend drinking? Estimate for the past month.

- |                              |                              |                              |                               |
|------------------------------|------------------------------|------------------------------|-------------------------------|
| <input type="checkbox"/> 0-1 | <input type="checkbox"/> 3-4 | <input type="checkbox"/> 6-7 | <input type="checkbox"/> 9-10 |
| <input type="checkbox"/> 1-2 | <input type="checkbox"/> 4-5 | <input type="checkbox"/> 7-8 | <input type="checkbox"/> 10+  |
| <input type="checkbox"/> 2-3 | <input type="checkbox"/> 5-6 | <input type="checkbox"/> 8-9 |                               |

5. How many days of the week did you drink alcohol during the **past month**?

- ☐ I do not drink at all
- ☐ About once a month
- ☐ Once a month
- ☐ Two times a month
- ☐ Three times a month
- ☐ Once a week
- ☐ Twice a week
- ☐ Three times a week
- ☐ Four times a week
- ☐ Five times a week
- ☐ Six times a week

Every day

